



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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4/23/01
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In re Application of

Group Art Unit: 1714

Takeshi KONDO, et al.

Examiner: Frederick G. Dean

Serial No. 09/322,333

Filed: May 28, 1999

For: Pressure Sensitive Adhesive Sheet and Method of Use
thereof

Honorable Commissioner of Patents and Trademarks
United States Patent and Trademark Office
Washington, D. C. 20231

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Sir:

DECLARATION UNDER 37 CFR 1.132

We, Takeshi Kondo and Kouichi Nagamoto, declare and state
that:

1.1. I, Takeshi Kondo, was graduated from the graduate school
of University of Shinshu, Engineering Department, majoring in
new material develop chemistry and received a degree of Master
of Engineering, in March 1994.

Since April 1994, I have been an employee of Lintec
Corporation. From 1995, I have been engaged in the
research and development work concerning new material for
electric/communication device field.

I am a co-inventor of the invention described in
the above-identified application.

1.2. I, Nagamoto Kouichi, was graduated from the graduate school of Kyushu Institute Technology, Engineering Department, majoring in material engineering and received a degree of Master of Engineering, in March 1995.

Since April 1995, I have been an employee of Lintec Corporation. Till the present time, I have been engaged in the research and development work concerning new material for electric/communication device field.

I am a co-inventor of the invention described in EP 0 798 355.

2. We carried out the following experiment in order to demonstrate the superiority of the process according to the present application.

Example 1 of EP 0 798 355 was reproduced to prepare base sheet. The value " $\tan \delta$ " of resulting base sheet was measured in accordance with the method described in the present specification.

Results are summarized in the following table together with Examples 1 to 3 of the present specification.

Data plots are attached herewith.

| | Urethane Acrylate Oligomer | Monomer | Photoinitiator | Max. value of $\tan \delta$ (-5~80°C) | $\tan \delta$ at temperature of | | | | | | | Back grinding aptitude |
|------------------------------|---|--|--------------------------|---------------------------------------|---------------------------------|------|------|------|------|------|------|------------------------|
| | | | | | 0°C | 25°C | 40°C | 50°C | 60°C | 70°C | 80°C | |
| USSN.09/322,333 Example 1 | Arakawa Chem. Ind. Urethane oligomer Mw=5000 [50p.h.r.] | Isobornyl acrylate [50p.h.r.] | Irgacure184 [2p.h.r.] | 0.78 | 0.15 | 0.31 | 0.52 | 0.71 | 0.78 | 0.65 | 0.52 | Good |
| USSN.09/322,333 Example 2 | | Morpholinyl acrylate [50p.h.r.] | Irgacure184 [2p.h.r.] | 0.85 | 0.08 | 0.19 | 0.33 | 0.5 | 0.69 | 0.84 | 0.84 | Good |
| USSN.09/322,333 Example 3 | Nippon Kayaku Co. Urethane oligomer UX3301, Mw=8000 [60p.h.r.] | Isobornyl acrylate [25p.h.r.] Morpholinyl acrylate [25p.h.r.] | Irgacure184 [2p.h.r.] | 1.18 | 0.08 | 0.26 | 0.53 | 0.86 | 1.08 | 1.0 | 0.68 | Good |
| BP 0 798 355 Example 1 | | Morpholinyl acrylate [40p.h.r.] | Irgacure184 [4p.h.r.] | 0.69 | 0.09 | 0.15 | 0.21 | 0.27 | 0.36 | 0.52 | 0.69 | dimpled |

4. From the results of the above Experiment and based on our best knowledge and experience in this field, we conclude that the base sheet prepared in Example 1 of EP 0 798 355 had maximum value of dynamic viscoelasticity $\tan \delta$ of 0.69 which does not satisfy the invention claimed in the amended claims, and is inferior in "back grinding aptitude". Thus, unexpected effects attained by the present invention are clearly demonstrated by the above experimental work.

The undersigned declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

This 11th day of April, 2001

Takeshi Kondo

Takeshi KONDO

This 11th day of April, 2001

Kouichi Nagamoto

Kouichi NAGAMOTO

[E]
dyne/cm²

$\tan \delta \times E' \circ E' \Delta$

98/4/16
KONDO
507L/50

米国特許出願
No.09/322,333
実施例 1

USSN 09/322,333
Example 1

[tan]

E10

1.0

E 9

0.1

E 8

.01

-20

4

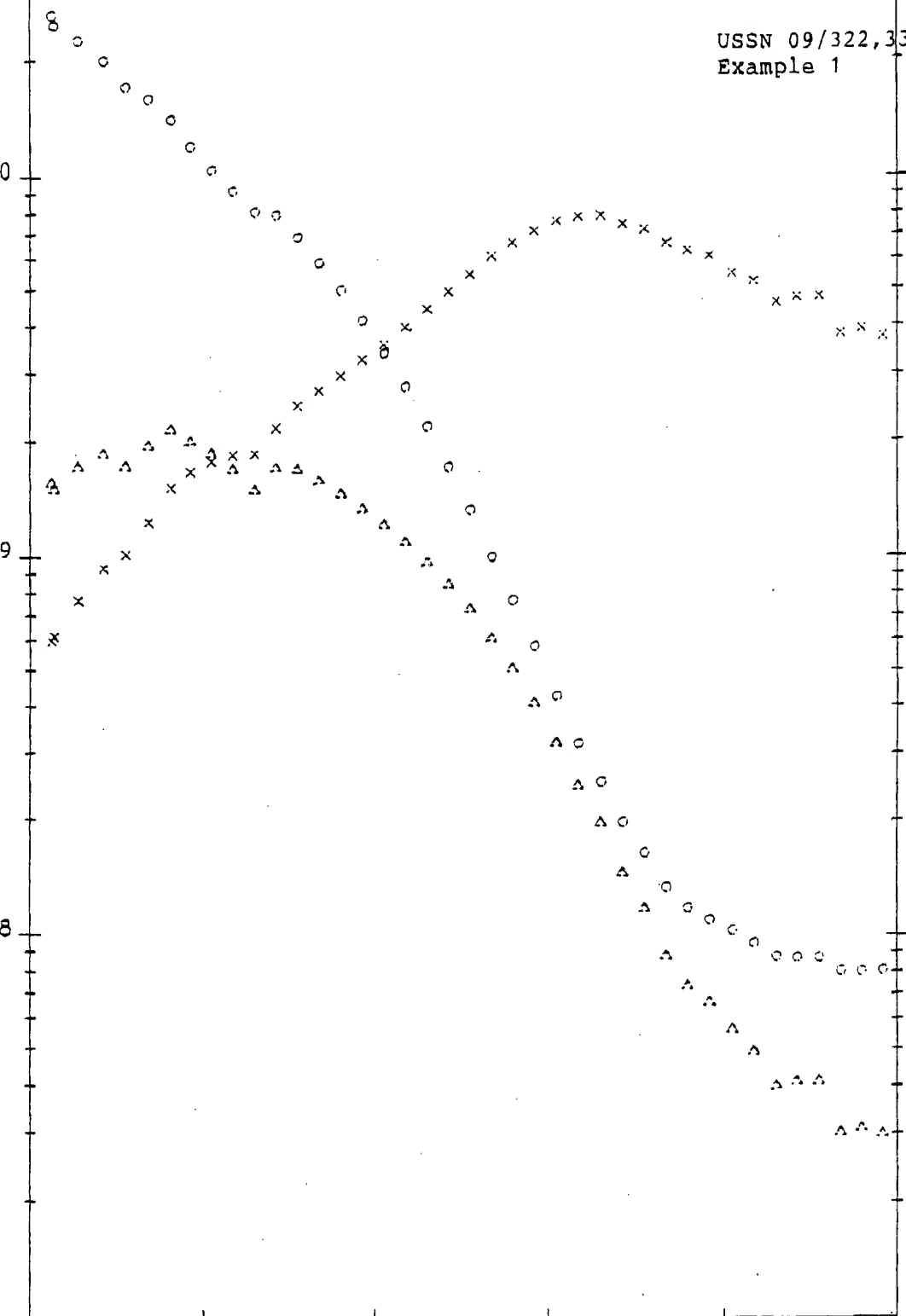
28

52

76

100

[TEMP.] (°C)



[E]
dyne/cm²

$\tan \delta \times E' \circ E'' \Delta$

98/3/9
KONDO
Y-2

米國特許出願
No.09/322,333
實施例 2

USSN 09/322,333
Example 2

E10

E 9

E 8

[tan]

1.0

0.1

.01

-20

4

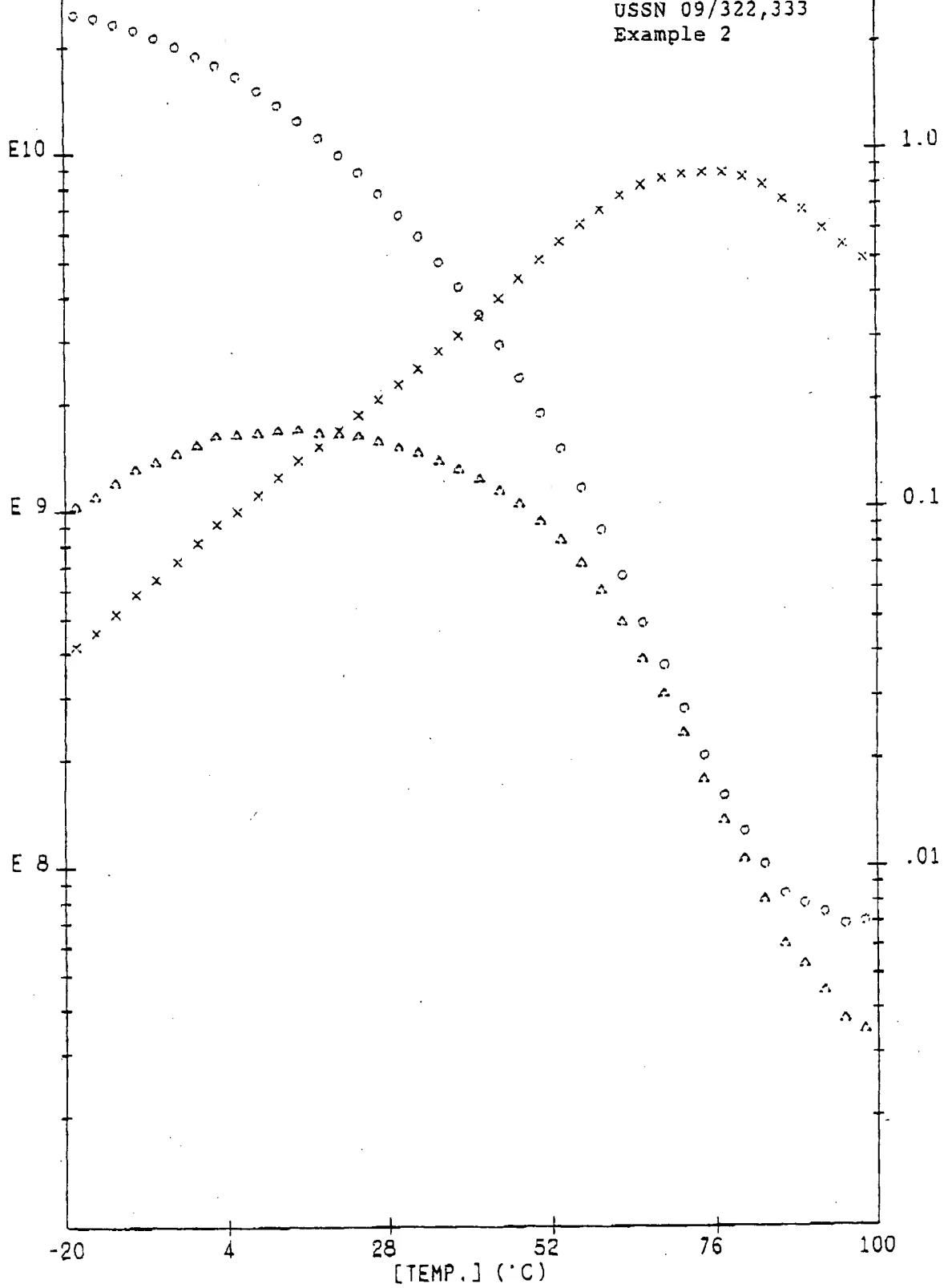
28

52

76

100

[TEMP.] (°C)



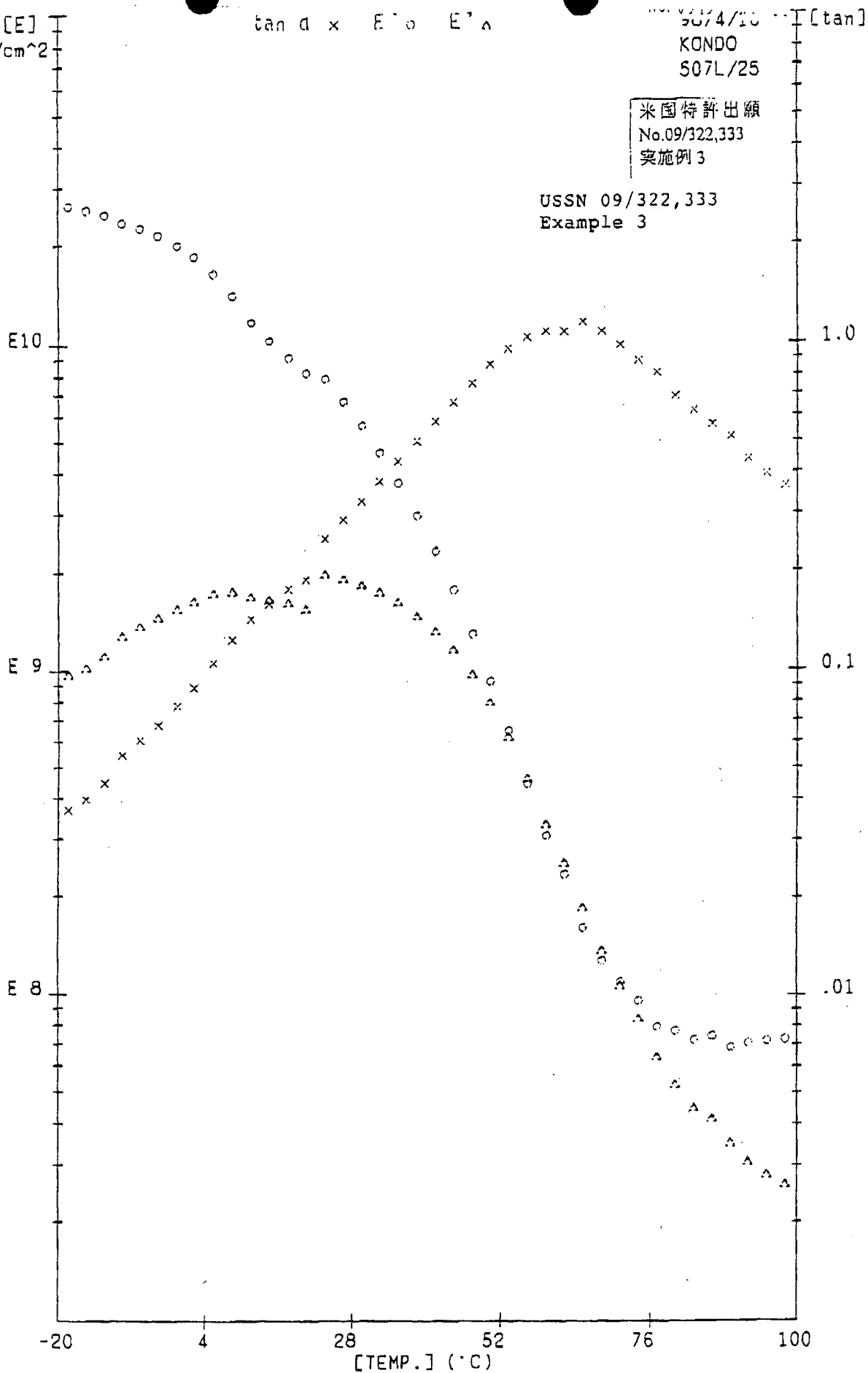
[E]
dyne/cm²

$\tan \delta \times E'' \circ E' \Delta$

93/4/10
KONDO
S07L/25

米国特許出願
No.09/322,333
実施例 3

USSN 09/322,333
Example 3



[E]
dyne/cm²

$\tan \delta \times E' \circ E'' \Delta$

01-03-28

KUBOTA

UL1

[tan]

引例：特開平

9-253964 号対応

EP

実施例 1

EP corresponding to JP-A

9-253964

Example 1

E10

1.0

E 9

0.1

E 8

.01

-20

4

28

52

76

100

[TEMP.] (°C)

